

At the time of IBGE, the Brazilian statistical activity in three social-historical periods. The challenges of the present moment

Nelson de Castro Senra¹

ncsenra@gmail.com

Doctor in Information Science (Federal University of Rio de Janeiro)

Retired researcher of IBGE

Professor of ENCE / IBGE

Résumé:

Depuis 1936, lorsque l'IBGE a commencé à fonctionner, l'activité statistique brésilienne est divisée en trois périodes. Chacune de ses périodes sont présentée dans ses fonctions. Et pour guider l'analyse socio-historique faite dans ce texte on s'appuie sur la notion d'«activité statistique», que est présenté dans un équation symbolique avec trois termes. Cependant, il'y a d'autres notions (ou méthodes) permettant d'effectuer ce genre d'analyse socio-historique, et un résumé de ceux-ci est présenté. A la fin du texte une analyse spéciale de l'heure actuelle est faite, ce qui suggère la nécessité d'une coordination des trois types de statistiques demandées au moment.

Mots-clés: Activité statistique brésilienne, L'analyse socio-historique, Méthodes d'analyse, Coordination, Exigence de statistiques

¹ Full member of the Historical and Geographic Institute of Rio de Janeiro. Founder member of the Association of the Americas for Statistics History and Calculation of Probabilities.

No tempo do IBGE, a atividade estatística brasileira em três períodos históricos. Os desafios do momento atual

Resumo:

Desde 1936, quando o IBGE começou a funcionar, a atividade estatística brasileira é dividida, neste texto, em três períodos, cada um deles sendo apresentado em suas características. E para guiar a análise sócio-histórica feita neste texto vale-se da noção de “atividade estatística”, apresentada numa equação simbólica com três termos. Entretanto, há outras noções (ou métodos) possíveis para se realizar esse tipo de análise sócio-histórica, e uma síntese deles é apresentada. Ao final o texto faz uma análise especial do tempo atual, sugerindo o imperativo de uma coordenação, tendo em vista que há três tipos de demandas estatísticas presentes no país.

Palavras-chaves: Atividade estatística brasileira, Análise sócio-histórica, Métodos de análise, Coordenação, Demandas estatísticas

The Brazilian statistical activity at IBGE (Brazilian Institute of Geography and Statistics) time, according to a social-history approach, can be identified by three periods: around 1936 to around 1966, around 1966 to around 1996 and from that time on. Indeed, chronologies can be seductive, but it requires special care: considering as successive situations the ones which are many times simultaneous is a risky attitude. That is the case of the division here used and the explanation for the additional “around” before the years is in order to mitigate misunderstandings but it does not solve completely the problem as one mentioned time may come from a previous one. In other words, the chronological borders between periods tend to be nebulous.

The first period was collegiate and highly parliamentary due to the strong work division in the production but with intense coordination, yet with no major technical-scientific resources. The second period, without the previous collegiate practices, could make a production of a more technical-scientific nature advance (the census coverage in the territory for all themes was abandoned, giving place to priorities setting and highlighting the economic census), moving from a wide picture of the nation to a specific thematic one (with strong emphasis on economic phenomena).

In the third period, due to a growing and varied demand for new themes coming from many points (the world summits and the state, municipal, and metropolitan master plans), many official statistical institutions arose in the federal and state levels. The use of the communications and information technologies made a return to the administrative records possible. This new offer, however, was confused and pretty inconsistent, demanding a lot of coordination, something not easy to create after having lost its practices in the second period despite the technical-scientific tools now used as facilitators (such as classifications, records, etc.).

What to do, then? The goal of this study is to find an answer for that. It is still a rehearsal despite the fact it is the third approach to the subject. We had two exhibitions with rich debates in 2012, one at the Brazilian Society of History of Science (SBHC), in São Paulo and another one at the National Association of Planning, Survey and Statistical Institutions (ANIPES) in Fortaleza. A lot was gained through the ideas exchanging by e-mail with Dr. Ferreira da Cunha, notable Portuguese intellectual, former vice-president of INE-PT and still its president’s consultant. His patience has brought me much from Portugal’s experience (Brazil’s sister country) and the European Union’s in the context of EUROSTAT. Of course, it has to be seen through the national culture, especially by the long Brazilian statistical culture long before IBGE, back to the Old Republic with Bulhões Carvalho and even earlier with the Count of Linhares when the “Joanina” Court came to Brazil at the end of the colonial period.

Anyway, there are many ways to perform a social-historical analysis of the statistical activity, which will be soon briefly presented. We prefer using a method which has been evolved slowly in our last papers and teaching experience, expressed in a statistical activity equation described below, not a mathematical (at least, not for a while), but a symbolic one. Next, we present an overall view of the history of the Brazilian statistical institutions and right after that, in the same patterns, the history of the Brazilian statistical activity. After that, in summary, some solutions are suggested based on a return to coordination. Finally, a bibliography revealing the theoretical base I could add to the tools I

gathered in my 37-year-practice at IBGE. Such reading was presented to me by the professors Aldo de Albuquerque Barreto and Maria Nélida González de Gomez, my advisors in my doctorate in Information Science (1994-1998), and without such knowledge, I would be still restricted to practice.

Ways to analyze changes

There are many ways to consider the statistical activity as a whole. It is not our intention here to treat them exhaustively but simply to present a summary. Before, however, some words: its applications to the historical realities of the countries are quite appropriate, as they (old or new ones) have different statistical histories, sometimes long and solid, sometimes long and weak, or even recent but already solid. Anyway, it is necessary to consider the national cultures in this context.

One of the recent ways is to mark these “historical-statistical eras”, whose authors, even though tuned as a whole, vary as single ones. It is common to mark two statistical eras more or less recent: one starting in the middle of the nineteenth century, with the International Congresses of Statistics followed by the first years of the International Institute of Statistics, and going into the first half of the twentieth century. Another one, which starts with the maturation of sample techniques and the quantification process of the economic activity, begins to weaken at the end of the same century with the globalized crisis. This way, a third era starts at the end of the last century and more presently, still with no greater structures and visibility. Concerning the period prior to the historical eras, more or less visible, it is customary to mark a proto history of the statistics, sometimes setting its beginning in the first half of the nineteenth century or the middle of the eighteenth one. There would be for some authors a statistical pre-history of controversial delimitation before this proto history, though.

Another way is to use the “historical ages”, more common and subject to higher opening. In this case, one marks the beginning of the old, middle, modern and contemporary ages, leaving subjacent, and sometimes clear, the existence of a pre-history prior to the old ages, and not rarely an intermediate proto-history between a pre-history and a history period. Its critical point and of hard solution is the last period, the contemporary, which should be opened and even updated, as it is, so far, a very long age. Such change is complex and there are many divergences among authors. The perspective previously seen is too wide. But, for the good or the bad, allows some international comparison, while these ones, for being more national in its application, make international comparisons practically impossible. This national character has the advantage of permitting an association of the national statistical to the national history itself, what broadens the number of scholars in social-history community, which is seductive and necessary to the success of this field.

There is a mark of the “statistical traditions”, in which the old and classical ones are accepted with no further controversy, something strange to the current time. Thus, there would be the German (or Prussian) tradition around the seventeenth century turned to the big picture of the nation. Soon after, the English one, around the eighteenth century and focused on the solution of specific problems, followed by the French tradition, around the nineteenth century and more

related to the society administration planning, which of them strongly reflecting the history of their countries, not without, along the years, a mixture of those traditions, even in the countries of origin. The twentieth century updated the previous traditions, sometimes having in relevance the English, sometimes the French one, with the German tradition in evidence every other time. Even though it was modern and updated, this tradition started to submerge at the end of the twentieth century and even more in the twenty-first, yet with no name but of universal character, reaching poor and rich countries, in different ways. The fixation of basic rights was desired and not more the old ones, although some of them still required attention due to the crisis in the welfare state. As there is a search for quantifying highly complex phenomena, such as the fight against absolute poverty, small income of certain levels, etc., and strongly social-economic, such a thing demands the association of many different statistics, with special highlight to the social and even the review of the economic ones.

And there are less historical ways on the focus and the denomination created from the social political approaches. This is the case of observing the “statistical activity” at a single time, as a “way of knowing” (in the line of Bruno Latour, who highlights, among many other points, the notion of “computer center”) and as a “source of power” (in the line of Michel Foucault, who highlights, among many other points, the notion of man-machine and man-species). Little by little, the statistical institutes appear in a long and slow history of the passage from the technical-administrative to the technical-scientific. In this process, we could underline the “maturity and the regularity of the surveys” in which three variations emerge: first, the imitations of survey, simple counting, enquiries and other name, very irregular; second, the surveys better formulated, but still irregular; and finally, in a slow evolution, the regular surveys. Such perspective allows us to have a glimpse, in an association still very open, at the two dimensions of the statistical activity: on one hand, the social-political (“source of power”) and the other one, the technical-administrative which turns out to be the technical-scientific (“way of knowing”).

There is the “systemic approach”, where two dimensions or natures are marked: a cognitive approach and another one institutional, also called, respectively, “informational” (or “epistemological”) and “structural or social”. Regarding the cognitive dimension, there is usually no system, as there is no theory which approaches the society as a whole, being only possible to organize subsystems, as the ones of economic statistics, being the social confusing. Regarding the economics case, apart from the big synthesis, sub-systems with no originality are established (the agricultural, the industrial, the commercial and service); and concerning the social case, except the demographic aspect and maybe some other one, is only close to the realities.² Currently, the environmental statistics arises, but not with a complete and sufficient theoretical picture yet. All in all, what we have in terms of informational statistics system is an approximation to the realities. Concerning the structural or social dimension, although it is simple to associate different institutions, this is more viable once it does not demand a theoretical picture, yet it needs a social-political willing, administrative competence and coordination disposition.

2 See in the bibliography the text by Eduardo Augusto Guimarães, former president of IBGE, as well as some texts by Ivan Fellegi, former Chief Statistician of Canada.

There is also, with intense use lately, a notion of “information regime”, which focuses on three aspects: the structures (or organizations), the norms (or regulations) and the practices (or everyday activities); it is a very favorable focus on different national realities, and has been used in comparisons among national histories. Two common users of this notion are Jean-Pierre Beaud and Jean-Gui Prévost, both from Canada, hometown of two great theorists on “information regime” in the context of Information Science: Bernd Frohmann and Sandra Braman, who, curiously, are not mentioned by them, though. In Brazil, Maria Nélide González de Gómez should be highlighted, particularly because of her recent production. Such way deserves studies and it can be applied in different knowledge fields and not only in the social-historical studies.

Statistics can also be focused through “the view of the users and the view of the producers”. The first one considers them as means of analysis to validate or not the work hypothesis in academic research, to formulate public policies and even evaluate them, while the second one take them under a prism of techniques and methods. In general, the producers are capable of putting themselves in the user’s shoes, the contrary seldom happening, always getting results which do not meet them (if they exist, and even more when they do not exist) as a result of incompetence, or, at the best, producer’s ill will. The dialogues among these actors are never simple, but, through dissemination and amplified propagation it has been possible to increase user’s satisfactions, yet they continue not to understand the “intimacy” of the productive work.

Having State and Society as a range, on one hand, and on the other one, the sciences (calculations centers and science centers) and research methods (with techniques and technologies), we prefer a “social-history” approach, with a mixture of history, sociology and methodology. In summary, we focused on a “statistical activity” in three terms, which we can be expressed in a “symbolic equation”, with no mathematical formality (for a while), what will be discussed below in the next section.

The “symbolic equation” of the statistical activity

The statistical activity can be divided in three moments. The supply (with the stages of production and dissemination / propagation) as the focus and which is between two demands: one, the upstream or *ex ante*, and another one, the downstream or *ex post*.

Outlining the two demands is essential to conciliate two opposite scientific perspectives: one belonging to the Economics Science which states that a supply process does not start without a demand, and another one, from Information Science, which states that demand comes after offer (supply). The *ex-ante* demand is punctual, centered or concentrated, has few actors and it is through it that the information is willed (not rarely called knowledge). On the other hand, the *ex post* demand is continuous, open and wide, has many actors with different profiles and knowledge concentrated on it (upper level of information).

Before going any further, two things should be pointed out: not only as data (syntactic plan) but one can see statistics since the beginning as information (semantic plan) aiming knowledge (pragmatic plan).

The equation is bellow, with its three terms, and we dare to suggest that this equation is the best one to the capture of the generator activities of information / knowledge:

$$\text{ex ante D} \rightarrow S \{\text{production} + \text{dissemination} / \text{propagation}\} \rightarrow \text{ex post D}$$

The statistical activity is fulfilled in a statistical institution. These institutions have history, with solid tradition or not, with influences on present decisions. They have ever fought for autonomy and independence. The methods / methodologies and techniques / technologies make the statistical activity more useful and efficient, with more or less credibility, able to consolidate their legitimacy.

These institutions practice the supply from a statistic program. Even though it results from an intense dialogue with the users, there is a previous vision of its context and shape, resulting from national experience and international influences. The users, although strongly independent, need this dialogue once they are in the statistical program. Yet those users are not many, shortlist them is a hard task: whom to listen, how deeply, how often? Once the demand is manifested, it is important to move from willing to possible, being necessary to practice successive "translations" from big themes to the query to be included in the questionnaire. This process involves distinctive languages, rarely known by users, making the dialogue difficult. After all, not everything will be met, not rarely due to a lack of concepts and/or methods.

After this moment, which represents an *ex ante* demand, the offer (supply) time starts, with the production and dissemination / propagation steps (both sequential and simultaneous). This moment is sustained, as seen before, on a growing technical-scientific ambient, and when the sciences do not offer concepts and definitions, one should search for some consensus established in the scientific community. The absence of this support in science, when this link is missing, there should be at least a conceptual consensus, as well as of consistent methods of research, is limited to offer. In these situations, statistics institutions should start its creations, stimulating a three-part cooperation: thematic areas, academic environment and they, the statistics institutions, becoming not only calculation centers but also a center of science. None of them easy!

The closing of the offer is a growing "guessing" of the user's needs and willing, whether they are peers, while making a community of experts, or a broader audience (especially the media). It is important to offer each group a portfolio of proper products and service, as well as friendly instruments of access to the database. Even though advances were made, there were also some absences.

To complete the offer passage to the users who were in the *ex post* demand, a special service practice is needed, and from the counterpart of no meeting (what is more difficult and complex). There are reading rooms, already traditional, points of sales, as well as distant interaction resources. And it has used, and even more at this moment, modern techniques of marketing, speaking of the existence of the statistics.

History of Brazilian statistical institution

For a better understanding of the following discussions, it will be necessary to broadly draft a history of the Brazilian statistical institutions.

When IBGE started on May 29th 1936, with the ambassador Macedo Soares as its chairman at that time, it meant a positive inflection to the Brazilian statistical activity. It cannot be considered as the year zero, though. IBGE was the heir of a statistical tradition of remote origin. It is well clear in the words of its idealizer/ founder, Teixeira de Freitas, when greeting Macedo Soares. At that time, he brings the figure of Bulhões Carvalho, a remarkable thinker of the Brazilian Old Republic time, as a great name in the Brazilian statistical activity. He details his countless accomplishments, some of them incomplete due to the federative social-political limitations of the time, many sometimes impossible to reach the necessary federative cooperation. Anyway, he valorizes Bulhões Carvalho's countless attempts and his comprehensive view so much that he considers him the pillar of the new institution, regarding the proper time innovations. IBGE had him as a master, giving Bulhões Carvalho the title of "Founder of the General Statistics of Brazil".

Indeed, Bulhões Carvalho, the longest General Director of the General Board of Statistics (1907 to 1909 and 1915 to 1930), was able to form in Brazil a critical mass on his admirable statistical activity, systematically and broadly³, period which consolidated the activity and the statistical institution in a national range⁴. However, such know-think, and even know-how, did not walk hand in hand to a can-make, disturbed by the extreme federation of the Old Republic⁵. Although Teixeira de Freitas highlights Bulhões Carvalho as a kind of a "Forefather" of IBGE, it is not fully right to state that the Brazilian statistics activity has its origin on him.

Although there was no continuous and systematic statistical activity at the Empire time, there was a desire for figures, in a search, maybe a beginner, for administrative objective. As examples, we could remember the creation of the aforementioned General Board of Statistics in 1870 and the performance of the first census in the country in 1872, with excellent results, and the foundation of the Statistical Society of Brazil⁶, 1855-1856, willed to be after the Société Statistique of Paris and the Royal Statistical Society of London.

Sebastião Ferreira Soares could also be valorized for the statistics concerning international trade that he led and for his terrific books, one of them with a close look on the statistical production routine. There were other people, sometimes dilettante, sometimes just curious, but not rarely turned to the international statistical literature, as can be shown in the role of Correia

3 See SENRA, Nelson de Castro. Na Primeira República, Bulhões Carvalho legaliza a atividade estatística e a põe na ordem do Estado. Belém: Boletim do Museu Paraense Emílio Goeldi. Ciências Humanas, v. 4, n. 3, p. 387-399, set./dez. 2009; and SENRA, Nelson. "Estatística: método e aplicação", a obra de vida de Bulhões Carvalho. Santiago: Revista Chilena de Salud Pública, vol. 16, n. 1, p. 61-74, 2012.

4 To form a staff, a translation was promoted and provided the publication of the book VIRGILII, Filippo. Manual de Estatística. Rio de Janeiro: Diretoria Geral de Estatística (Officina de Estatística), 1908. It was made legally mandatory public exams and tests to hierarchy growing, unfortunately not always observed.

5 This was against the Republic that intensively promised statistics. So it was that after the military intervention on November 15th 1889 which overthrew the Monarchy and brought back the former General Board of Statistics on the first days of January 1890, created at the Monarchy time, a census was performed in that same year 1890, considered general, with precarious results; another one took place in 1900, even poorer; there was no census in 1910, despite the effort and expenses, or in 1930 because of the revolution that ended the Old Republic period. Thus, the only big census of that time occurred in 1920, on the eve of the Centenary of the Independence of Brazil exactly by Bulhões Carvalho.

6 With the honor, rarely granted, to be put "under direct protection of the Emperor".

da Câmara⁷, at the beginning of an independent Brazil, in the southern of the country⁸.

Thus, there is an undeniable statistical tradition contributing, little by little, to the formation of a National State and of the Brazilian society (and consequently, to the citizenship). IBGE will be the one, however, to fix the thresholds of statistics in the public policies setting and it will consolidate a modern, continuous and systematic statistical institution, more and more autonomous and independent. Hence, we will briefly highlight its institutional history in the three periods here seen: the first one, from around 1936 to 1966; the second one from around 1966 to around 1996; and the last one, from that time on.

The first moment (app. 1936- app. 1966) is highly dependable on the access of administrative records (especially the civil ones), of state and municipal nature, for information gathering. Apart from that source, only the census was left, which were slow and expensive at that time. The direct research, in homes, companies and public agencies, were still at its very beginning. The access to the records should be negotiated then, which would be either indirect, by their "owners", or direct, through special technicians placed in the statistical activity. It was necessary to promote an administrative cooperation of the three political levels (federal, state and municipal), which had been previously tried in the Old Republic and rehearsed by Teixeira de Freitas in Minas Gerais (in the 1920's). A legal cooperation would only finally occur in the context of an agreement proposed, discussed and approved to make the educational statistics advance in the context of the newly created Ministry of Education and Public Health in 1931 by the same Teixeira de Freitas. Immediately he would propose and fight for the creation of a National Institute of Statistics and Cartography but, as been contested for many reasons, was transformed in the National Institute of Statistics, later IBGE, providing better working conditions⁹.

Because of that, the first period would work out through Councils, Commissions, Committees, Executive Boards, and so forth, what meant by boards who met regularly, everyone having voice and vote, even though Teixeira de Freitas dominated the space due to the power of his ideas and the consistence of his argumentations. The Executive Board was composed by federal directors of thematic sections, and the state directors of statistics, among others, from the General Meeting.

In these boards, Brazilian intellectuals were called to collaborate in the "translations", thus the questionnaires or aggregation forms arose to access the records. The Statistics Campaigns started through the Municipal Agencies, seen as civilizing agents in the cities, initially only technically subordinated to IBGE but then administratively linked in its structure. Everything was very complex, what could lead to a failure, but, fortunately, could succeed.

7 See SENRA, Nelson de Castro. No início da atividade estatística brasileira, o papel de Corrêa da Câmara. Presented in November 28th 2012 in the XVIII National Congress of Populations Studies promoted by the Brazilian Association of Populations Studies.

8 It is also possible to consider Dom Rodrigo de Souza Coutinho, the Count of Linhares, minister of the Joanine Court in Brazil as a likely initiator of the Brazilian statistical activity, he and his followers / disciples, among them José Bonifácio de Andrada e Silva, the Patriarchy of the Brazilian Independence. In the study of this figure, we are still reading the thick books by SILVA, André Mansuy-Diniz, *Portrait d'un homme d'État: D. Rodrigo de Souza Coutinho, Comte de Linhares, 1755-1812*. Vol. 1. Les années de formation, 1755-1796 e Vol. 2. L'homme d'État, 1796-1812. Lisbonne, Paris: Centre Culturel Calouste Gulbenkian, 2002. There are also, organized by the same author, the texts of Count of Linhares in the volumes *Textos Políticos, Econômicos e Financeiros, 1783-1811*, at *Colecção de Obras Clássicas do Pensamento Econômico Português* (Lisboa: Banco de Portugal, 1993). Moreover, with text by that author, among others, the book MARTINS, Ismênia and MOTTA, Márcia (org.). 1808. *A Corte no Brasil*. Niterói: Editora da UFF, 2010. All those books were indicated to me by the historian Guilherme Pereira das Neves, whose book *História, teoria e variações* (Rio de Janeiro: Contra Capa / Companhia das Índias, 2011), mentions many times the Count of Linhares. Finally, there is the book VANDELLI, Domingos. *Aritmética Política, Economia e Finanças, 1770-1804*. Lisboa: Banco de Portugal, 1994 (*Colecção de Obras Clássicas do Pensamento Econômico Português*), sent to me by Dr. Ferreira da Cunha (Vandelli was José Bonifácio's teacher, the introducer of Political Arithmetic in Brazil).

9 The National Institute of Statistics was launched, becoming the Brazilian Institute of Geography and Statistics (IBGE), only in 1938, as SENRA, Nelson de Castro. "Em 1938 o 'G' se junta ao 'E', e surge o IBGE", sent for publishing in the magazine "Terra Brasilis", whose issue number 2013 will be dedicated to the presence of Geography in IBGE.

The mentor of it all was Teixeira de Freitas, a restless proselyte always ready to mold his idealistic (utopic) ambition to the principles of the reality or conjuncture; he was theoretical and practical at the same time. Postponed dreams but never put them aside for long and as soon as he could, he would bring them back. He fought for IBGE, in a battle with no headquarter. He was a man of many subjects, all of them linked to Brazil. His death in 1956 represented a big loss.

The crisis started with the new Brazilian Constitution in 1946, after a long period of dictatorship, but it is not the return of a rule of law which would jolt the bases of the system but the return to federation, an old hurdle to the Brazilian statistical activity, and such a thing was added to a change in the nature of the demand, now centered on the economic statistics. The focal points of the system in use were, on one hand supposed to be census in the territory and, on the other one, having all the subjects with the same level of priority, hindering not only the adoption of a sampling technique but also of new subjects, making difficult or impossible to meet the demands for economic statistics, highly triggered by the Economic Planning. Criticisms in seminars, commissions, work group, international consultancies had arisen since 1958 until a synthesis appeared. The proposal for changes would come in 1966 and IBGE became a public foundation of private law a year after.

The second moment starts. At the beginning, between around 1966 to around 1970, the change was not substantial and the expectations were frustrated. It was an interesting transition, however, for showing the strength of the old model, that is, there was a big effort to keep traces of the past, what it can be considered natural, after all, everyone was disciple of Teixeira de Freitas¹⁰. Many innovations were introduced, though, both technological and methodological, such as the sampling adoption in the context of the Atlantida Project¹¹, which “taught” the Latin-American statistical institutes how to perform the technique. That was the beginning of the National Household Sample Survey (PNAD). The civil registration was resumed and updated.

Due to that scenario, a profound change was made, taking some people by surprise: Isaac Kerstenetzky chaired the institute, remaining until 1979. He was a man of planning, not from the old psychological-mobilization-planning school, but a planning supposed to be “scientific”, demanding better statistics, especially economic ones, which were very complex.

A centralized statistical model started in a hierarchical institution, with thematic boards. The statistical program was different, associating statistics to geography and announcing the derived statistics, namely the economic ones. Right together with these and the great aggregates, the “social indicators” dream would arise, never fully accomplished, but quite approximated. The statistical system was associated to the centralized planning.

Undoubtedly, the changes deserved a warm welcome but in a medium-term range would present some problems due to the “abandon” of the administrative records and of the subjects with no immediate interest to the economic statistics - closely linked to the first one - resulting in the “abandon” of the state statistical institutes.

¹⁰ For the first time in its history, IBGE would have a president from its staff, Sebastião Aguiar Ayres.

¹¹ That was made by the United States Bureau of the Census, a Project sponsored by the United States Agency for International Development (USAID).

The coordination, still kept in the legislation, became a simple rhetoric figure. The statistical institutes of the states and even the thematic federal ones, due to the dominant power of the centralized planning, became quite pale. IBGE became more and more hegemonic, almost the only one, with increasing technical-scientific credibility and high legitimacy, whose name meant good and high quality statistics. Although its glorious moment, IBGE would be about to face a moment of crisis.

With the National State crisis emerging and broadening, in the trails of the oil crisis, the centralized planning was slowly put aside and in the second half of the 1990s, IBGE struggled to adapt to it. It had become so unique that it had no action margin. It was clear the depletion of the model. The new Constitution in 1988 represented the return of a rule of law, broken by the military circle from 1964 to 1985, aggravating everything specially for making their personnel civil servants. IBGE fight was erratic until around 1996, when new horizons appeared in the management of Simon Schwartzman and his bold view of the world¹².

Man of multiple skills, he would bring innovations and renovations to (re)form the staff. A mark in his administration was to broaden the international relations, showing that a “minimum” National State should not and could not forget to produce official statistics. With accuracy, he did what should be done, mas preferred to resign in the second term of the president Fernando Henrique Cardoso.

A pro-international statistics program rose still based on economic statistics (plus the financial ones)¹³. The demands for social statistics would come soon, as well as for the environmental ones, difficult subjects to be met by statistics through sample surveys or census, making inevitable a return to the administrative records as a way to approximate these new demands. Although these records were modernized by information technology, it was still very difficult to be used by a single central agency and the coming of thematic producers was natural and inevitable. It could not go far without a unit to lead these thematic agencies, though. What was supposed to be promising turned out to be confusing. For the good or the bad, some advance and stability were reached, but the calm before the storm would be interrupted by the global crisis in 2008. The lack of coordination was threatening¹⁴.

History of Brazilian statistical activity

Completing the history of the Brazilian statistical institutes, the history of its statistical activities will be seen from the “symbolic equation” previously presented, the simplification will be inevitable due to its big number of situations.

In the first period, *stricto sensu*, the figure of the user did not exist. In a *lato sensu* approach, some producers, called “estatistas” (statists) were the users. They were people on the top of their careers who beyond the understanding of the day by day of the production, they could also understand the

12 See SENRA, Nelson de Castro. Pensando e mudando a atividade estatística brasileira. In: SCHWARTZMAN, Luisa et al (org.). O sociólogo e as políticas públicas. Ensaios em homenagem a Simon Schwartzman. Rio de Janeiro: Ed. FGV, 2009. P. 175-198.

13 Meanwhile, the economic statistics are criticized, but no more the fugitive and ideological criticism of the past. See FEIJÓ, Carmem Aparecida et al. Além do PIB: uma visão crítica sobre os avanços metodológicos na mensuração do desenvolvimento sócio econômico e o debate no Brasil contemporâneo. Estatística e Sociedade, Porto Alegre, n. 1, p. 42-56, nov. 2012. [Revista da Associação das Américas para a história das estatísticas e do cálculo das probabilidades]

14 For further details, see the four volumes of the collection História das Estatísticas Brasileiras in the bibliography. There is also a volume synthesis of the collection (out from the series), unfortunately too big to be able to meet its actual objectives.

problems of the country, trying to suggest solutions. Nevertheless, there was still a lack of practical use of the statistics, that is, a figure-thinking. Actually, it was more of a figure-taking as an innermost reference and this reduced use had been long applied¹⁵.

If we take as an example the education subject, which influenced considerably in the creation of IBGE, one can realize that notable names as Anísio Teixeira and Fernando de Azevedo just briefly mentioned statistics¹⁶. Also, in the introduction volume of the results of the 1940 census, the first one performed by IBGE, “A cultura brasileira” (“The Brazilian Culture”), written by one of the greatest Brazilian intellectuals, the aforementioned Fernando de Azevedo, the figures are not basic¹⁷. Stronger is the example of Teixeira de Freitas himself that in his study named “Problemas de Base do Brasil” (Brazil’s Base Problems) in 1945, perhaps a national plan founder, had not explicitly used the figures.

In all and for all, the *ex ante* and *ex post* demands were taken one by the other.

The offer in this period had a technical administrative nature, being simply counting. The questionnaires and other instruments made by the boards, using the intellectual consultants, tried to harmonize the different subjects. After a publicity campaign, the questionnaires were applied by the collecting net, which was directly controlled by IBGE. Next, they were delivered to the thematic sectors to be measured. Little by little, given the advantages of the counting machines and because of their high price, IBGE bought them and took over the counting task and soon after, all the other ones¹⁸.

The figures were put in tables in the “dissemination plans”, and the rest remained for a short period of time in the questionnaires as they were soon destroyed due to the confidentiality of individual information¹⁹. In summary, either those crossings pleased or there was nothing left to be done. The disseminated results appeared in the Statistical Yearbooks. As they were insufficient in terms of frequency and number of statistics produced, they were added to the Statistical Reports, and only later to the thematic publications, similar to the one performed in the census.

All of those publications and others were sent to the ministries, libraries, schools, etc. Some press releases were written by Waldemar Lopes and the results presented in lectures in different occasions, especially by Teixeira de Freitas and Rafael Xavier, his successor in the general secretary²⁰.

Meanwhile, the staff was shaped and consolidated, making a specialized activity. The sampling and other techniques were already discussed in the articles of the Revista Brasileira de Estatística (Brazilian Magazine of the Statistics)²¹, in national and external books (translated) which were edited by IBGE, as well as lectures by foreign and national scholars.

15 In the Old Republic, apart from the sanitariat demographers, there were practically no users, not even the governments demanded statistics or would require them in an overview.

16 Regarding this subjects, the exceptions were Teixeira de Freitas and Lourenço Filho who used statistics intensively in their diagnosis and solutions.

17 It was already true in the volume which introduced the results of the census of 1920, when Oliveira Vianna, another well-known intellectual, wrote “O povo brasileiro e sua evolução”.

18 The first mechanical innovations were introduced in the census of 1906 which took place in the federal capital, an inflection point in the Brazilian census history, being then repeated and consolidated in the General Census of 1920; important to mention the use of Hollerith cards, classified and counted in the machines of the Tabulating Machine Co. (as said by Bulhões Carvalho). Only in the Census of 1960, a computer was used as well as the sampling techniques, both bringing problems.

19 The confidentiality was applied when individual information was for statistical ends. But the results were public, apart from the period of the Second World War, when Brazil acted together with the Allies, when the statistics were considered National Security.

20 At the end of each year, a report on the institutional accomplishments was delivered to the President of the Republic in the official cabinet and its context was used in the presidential message to the National Congress.

21 This magazine is from 1941, and still remains, together with the Brazilian Magazine of Geography. Later, we would have the Brazilian Magazine of the Cities. The books formed a Statistical Library, in the sense of collection.

In the second period, there were profound changes in the two demands and also at the offer time. There were expressive changes in the staff with the acquisition of masters and doctors but with no tradition and value confiscation thanks to an *"ibgean mystic"* molded in the daily catechesis of Teixeira de Freitas.

The external users came along, separated from the producers. In order to hear the users, National Conferences of Statistics were forecasted. They were of difficult convocation and conduction and, particularly, of hard *"digestion"* in the discussions, and the general plan or statistic program were not under updating changes.

The strong point, as seen, would be economic statistics, with the govern as the main demander. Part of the derived statistics was done by Getúlio Vargas Foundation. However, it was necessary to renew them and modernize the so-called primary statistics, as well as the census, what demanded an active IBGE to take over the statistic program, mainly after the demand for social indicators, as well as advances in statistics and indicators of population.

IBGE as public foundation or private law would have a new statistical legislation with a confidentiality law never so effective before. The sample surveys were used, originating the records for statistical ends and then gradually getting free from the administrative records. The demographic census continued to be decennial, but due to the *"economic miracle"*, which was supposed to bring deep changes in the economy, the economic ones started to be done every five years. Old surveys were renewed, such as the National Household Sample Survey, and others were created, for instance, the National Study on Family Expenditure (ENDEF). The statistics and the geography would have studies together and there was an enormous optimism floating.

The new staff was not only acting in the production, more precisely in the survey planning, but also working as an analyst, and a privileged one of the results. Therefore, they always wanted new tabulations beyond the ones in the publications. Obviously, the external users were getting annoyed and requested special tabulations, slowing the process due to the difficult way to recover the stocked information. On the other hand, the localized users in powerful institutions, such as foreign universities where the so called *"Brazilianists"* were, could acquire the pieces of information in magnetic tapes. Most of the users, however, were satisfied with the publications or requested and patiently waited for the special tabulations. Polemics arose and it was clear that a change was needed without delaying the dissemination or being limited to the publications.

Meanwhile, in the second half of the 1980s and the first half of the 1990s, in front of a clear delay if compared to the world, the National State crisis was getting revealed. Along with that would come the failure in the centralized planning, still the keynote and the tonic of the statistic system. It suffered a severe dent and lost the route, what did not mean it was remaining still, but did not change much, only superficially. The statistical programs used to be delayed, mainly in the emergent demands, such as social and later environmental focus. The question was: how to meet them?

Part of the demand was met by re-readings of the database built by IBGE and/or small adjustments in the surveys. Sort of sub-bases were created and permitted the rebirth of the *"privileged"* spirit

of analysis wanted in the second period, but now without prolonging the divulgations, now called disseminations. The fact is, by re-reading or by new survey queries, what really counted was the expertise of internal technicians, a staff of great value. Some new surveys would be still recreated and others renewed.

Nevertheless, much of the demand requested a return to the administrative records, although dynamized by the technologies but still difficult to handle. IBGE would only be able to act in few of these records, losing the richness of many others. Due to a lack of power, thematic agencies would appear, some well-structured, others less. These central thematic agencies were responsible for the coordination, but a know-how was missing, and, of course, a can-make an articulation in different subjects, something only IBGE could perform as the center of the thematic centers.

Before we go on, it is important to highlight the use of the expression dissemination since 1985 at IBGE to mark a relation between peers, while the expression divulgation was used in a relation to the public in general, not experts, each one with an own portfolio of products and services. IBGE centered both relations in the context of dissemination, attributing the expression divulgation only regarding the relation to the media, which is, certainly, a general and vital public. Thus, two activities are summed up: on one hand, a modern and advanced dissemination, with new services and products and, on the other hand, a bold, dynamic and respected one, overcoming both the standard service, with heavy printed publications, common in the first period, and the personalized service, with special tabulations, something new from the second period, passing through self-service. Thus, the users could make their own tabulations using information technology resources, increasing their satisfactions²².

At the offer time, the IT platform was renewed, with the increasing use of microcomputer science, permitting the producers to broaden the survey scopes and dynamize the processing. A valuable methodological and technological interchange with other statistical institutes took place, aiming especially an international comparison of results. The most notable name of that time, Simon Schwartzman, was the one who stimulated the most this opening to the international organisms. As seen before, he knew how to reflect and write about the Brazilian statistical activity, but still little reflected. His view of the world expanded horizons. Although he had a successor who followed his steps, many forecasted innovations could not occur. Time followed other routes, sometimes for better, sometimes for worse, unfortunately.

The imperative of the coordination, but which one?

In order to continue safely, some points shall be recovered.

Since Simon Schwartzman, app. 1996, the necessary changes were visible and undoubtedly really started. The changes, however, were taking place slowly, part due to prudence, part to inertia, although it is really difficult to change any routine already set. There was another reason, though. It

22 See SENRA, Nelson. Informação estatística: direito à privacidade versus direito à informação. *Transinformação*, Campinas, vol. 17, nº 1, p. 17-29, Jan./Apr. 2005.

was important to resume a new coordination because a new time was coming, definitely different from the one in use in the first period, but something not sufficient with the coordination tools laboriously developed in the second period, such as the classifications of activity, products, occupation as well as the daily attempt for record constructions, among others. The uncontested fact, want it or not, is that in order to have an effective and complete coordination one has to get close to its social political dimension, something repulsive to the militants of the statistical activity *stricto sensu*, where the technical-scientific dimension prevails. The coordination was a sort of supra or over activity floating over all statistical activity, since the *ex ante* demand to the *ex post* demand, passing through the offer and its steps, with a lot of social-political.

At the beginning of the historical time we are considering, there were some impasses or crossroads in the statistical activity, not because of crises such as external or internal wars, but due to a stated desire of the governments of that time (Getúlio Vargas's term around 1936, and in the military governments around 1966) to impose changes in the economy and then in the social life, where there should be more and better statistics, suggesting a centralization of statistical activity. In the first period, since the administrative records, still with federative characteristics of the Old Republic, were the key source of individual pieces of information, it was essential to decentralize the statistical activity through coordination (but, somehow, it can be seen as just mitigating a centralization, actually desired). In the following period, once the centralization could be widely open, the coordination was given second place, remaining only as the letter of the law, slowly it would have the benefits of technical-scientific tools, by the centralization need. In both periods, just semantically, the expression technical-scientific of the coordination was changed into harmonization or standardization and its social-political expression to cooperation or restructuring, occasionally, to the reform of the statistical legislation.

At this point, it is possible to wonder: why does the present imply coordination? What has been going on, more and more, that makes coordination essential to recover a complete unit of the statistical program? What kind of coordination would be more viable, more immediate? There would be a way to assure success in this choice? To answer those questions it would be necessary to show three situations that are occurring and tend to speed up, no more accepting palliative actions.

First demand situation: there are themes of national range subject to be in the IBGE agenda. It can be observed by statistics surveys. In part, it is enough to the internal technicians, who dominates more the context of the micro-data base, re-reading them in studies, extracting from them the answers to the themes pursued²³. The expansion of these studies, in the case of IBGE, could be possible if done together with the teachers of the National School of Statistical Sciences (of course it would not be easy, for lack of practice in this relationship, but would worth a try). In part, other actions would be needed, such as putting some questions in old surveys, or even associate them to some additional questionnaires; and on the edge create new surveys, provided that there is scientific and technical support, on concepts and definitions, or, at least, they were based on consensus in the communities

23 When one sees further this studies, the eternal dilemma of the limits of the analysis in the interior of the statistical institutions, with a historical look, was never pacifically perceived, that is, this limit has always been in a mobile frontier, advancing more and more beyond, leaving behind mere disseminations of figures in tables or graphs (and, one at its own time, were expansions of this frontier).

of researchers, and, of course, if there are resources. IBGE has been paying proper attention to these themes, and the changes already underway, more and better linking surveys (more internal coordination would help), suggest optimism²⁴.

The second demand situation: there are issues of national range, but that are not likely to be put on the agenda of the IBGE, for requiring strong use of administrative records; they are thematic demands, for example, for health, education, public security, etc.²⁵ Some changes in course, as in health, are slow and often require knowledge in survey and/or in coordination, extremely complex in structure and operation, with no further legislative supporters²⁶. IBGE would be the one responsible for delegating formally this thematic coordination, but even if it did it, this would not be sufficient; it would still promote inter thematic coordination, creating a center of thematic centers. Without this Board Coordinator, thematic efforts can little advance. At this moment it is important to say that for some themes IBGE has worked very closely, as in agriculture, and has complete control of the civil registry, but for very peculiar reasons.

Third demand situation: there are themes of local character or meaning, usually state, but also municipal (or metropolitan). They are demands resulting from an increased localized planning or the master plans of the cities (or in metropolitan governance) and are very varied, depending on the moments of the governmental policies. It is common to turn these demands to state statistics offices (or municipal) that, for a lack of statistics producers, they use the offers made by other offices, with highlight to IBGE whose improvement of dissemination (and divulgation) has a positive contribution. But IBGE does not advance together with the ANIPES-National Association of Planning, Research and Statistics Institutions²⁷. The fact is even though IBGE is kind to state and municipal agencies, it is reticent, and with reason, as they are very unstable and very dependable on the mood of local governs, what makes a continuous and systematic partnership difficult. They hardly act in the second situation of the demand. They are divided among different researchers at universities in the analysis, studies and the elaboration or evaluation of the public policies. It is imposed an IBGE coordination along with these offices in a more cooperative and continued sense²⁸.

It is now evident the necessity for coordination, in each of this demand or in an articulation of the three of them and only with practice of coordination, with no imposition, but without losing the focus, always listening, considering, assimilating and adapting and never ignoring differences, searching for an unit capable of widening the Brazilian statistical program. Concerning the way of coordinating, the natural would be a national coordination like the ones which were already

24 After a thorough reading of a previous version of this paper, Dr. Ferreira da Cunha sent me on May 11th 2013 notes that remind, among other points, the "Conjuncture Enquiries", also called the "Qualitative Enquiries" and indicated me a paper added to the bibliography.

25 In Health, with the main coordination goal, there is an entity called RIPSA – Inter-agential Net for Information to Health. In the security area, there is a National Forum on Public Security which advanced a lot under the direction of Renato Sérgio de Lima, so licensed technician of the Foundation SEAD. Regarding Education, with a strong statistics producer, there is the INEP – National Institute of Educational Surveys. A special case is the Public Security Institute of the State of Rio de Janeiro, associated to the State University of Rio de Janeiro (UERJ), which elaborates the state security statistic and analyzes them.

26 In Health, for instance, there are plenty of records and each one, for having an "owner" (old addition of such records) follow their own rules. Sometimes there are simple enquiries that, with a minimum effort, can be standardized, for example, sex notation, while others are more difficult to be standardized, such as areas and reference dates.

27 Such thing has happened, for example, in the context of National Accounts and it is desired localized populations forecast, but nothing suggests IBGE is willing to broaden this movement, unfortunately (even in the Municipal Survey there is no big partnerships).

28 Concerning this item, Dr. Ferreira da Cunha, at the same time of the mentioned reading (in May 11th 2013), recommended me the National Statistical System of the federal Republic of Germany that, according to him: "I consider good the relationship between the Federal Institute of Statistics and the Länder Institute", what I think shall really be a good reading.

in use in Brazil and for being the most immediate one, should be an internal coordination unit in IBGE, perhaps a board, nothing can assure success and everything depends on the choice of the coordinating authority whose profile will be mentioned at the end of this paper, after being mentioned the National Councils of Statistics.

While writing this paper and exchanging reflections with the aforementioned Dr. Ferreira da Cunha, in one of his many and patient messages, he sent me the following reflection which I shall here reproduce, respecting his European Portuguese spelling:

Na verdade, vem a propósito a asserção de que a nossa obrigação é conhecer o passado e estar atento à pulsação do presente, únicos sinais que nos podem ajudar a perspectivar o futuro, e neste contexto apesar da minha insuficiência cognitiva sobre o passado e o presente do IBGE não me permitir aportar contribuição enriquecedora da sua reflexão, atrevo-me a abordar os seguintes dois temas que salientou: a) o retorno aos registos administrativos; b) Coordenação do Sistema Estatístico Nacional.

Quanto ao retorno ao aproveitamento de dados administrativos para fins estatísticos oficiais, tenho para mim que este é um caminho a seguir, tendo presente que a história das estatísticas oficiais nos mostra que as primeiras com periodicidade regular foram as produzidas com base em dados administrativos – Comércio Externo e Demográficas – e tendo presente que a produção de estatísticas pelos métodos clássicos custa muito dinheiro e que se vai assistindo a uma progressiva reacção negativa aos inquéritos estatísticos clássicos por preocupações dos indivíduos em assegurar a protecção da privacidade, tal como no Renascimento penso que este caminho deve ser procurado, como é o caso do Sistema Estatístico da União Europeia tal como consta no Regulamento (CE) N.º 223/2009 do Parlamento Europeu e do Conselho, de 11 de Março de 2009 (direito supranacional), pelo que lhe envio apenso o respectivo ficheiro, bem como o de um texto que escrevi em 1989, mas que atrevo a considerar que ainda não perdeu actualidade.

Quanto à coordenação do Sistema Estatístico Nacional, tendo presente a necessidade de transparência e democraticidade, penso que a melhor solução é a constituição de um fórum tipo Conselho Nacional de Estatística (CNE), cuja natureza, presidência, composição e competências sejam compatíveis com o seu mandato.

E quanto a este tema, permito-me o atrevimento de lhe expressar o meu pensamento sobre:

Natureza do CNE: Órgão do Estado que superiormente orienta e coordena o Sistema Estatístico Nacional;

Presidência do CNE: Uma personalidade de reconhecido mérito científico e profissional e pela sua integridade e independência nomeada pelo Presidente da República;

Composição do CNE: Uma composição que assegure a representatividade equilibrada dos produtores e utilizadores das estatísticas oficiais, bem como dos fornecedores das respectivas informações estatísticas individuais de base necessárias à sua produção, sendo integrado pelos seguintes vogais: a) O presidente do INE, que exerce funções de Vice-Presidente; b) Representante do Banco Central; c) Um Representante de cada Ministério; d)

Representantes do sector empresarial privado; e) Representantes de associações sindicais; f) Representantes de ordens profissionais; g) Representantes de associações de jornalistas; h) Representantes de associações de consumidores de âmbito nacional; i) Representantes de associações de ambientalistas; j) Representantes de organizações não governamentais; k) Docentes universitários da área dos métodos estatísticos e econométricos ou de áreas afins; l) Personalidades de reconhecida reputação de mérito científico, integridade e independência.

Competências do CNE: a) Definir as directrizes gerais da actividade estatística oficial e estabelecer as respectivas prioridades, numa perspectiva de médio prazo; b) Aprovar, mediante proposta do INE, um código de ética dos profissionais de estatísticas oficiais e velar pela sua aplicação efectiva; c) Emitir parecer sobre os projectos dos planos plurianuais e anuais de actividades dos Órgãos Produtores de Estatísticas Oficiais que integram o Sistema Estatístico Nacional e dos correspondentes orçamentos; d) Aprovar a adequação dos planos referidos na alínea anterior às dotações orçamentais efectivamente alocadas mediante proposta do INE atentas as prioridades fixadas nos termos da alínea a); e) Aprovar, sob proposta do INE, os instrumentos técnicos de coordenação estatística, conceitos, definições e nomenclaturas estatísticas, de utilização imperativa pelos Órgãos Produtores de Estatísticas Oficiais, podendo propor ao Governo a extensão desta utilização imperativa a toda a Administração Pública; f) Fomentara eficazmente o aproveitamento pelo INE de dados administrativos para fins estatísticos oficiais, incluindo dados pessoais, formulando recomendações ao Governo que visam reforçar o acesso pelo INE aos mesmos e a sua participação na concepção dos respectivos formulários e registos de suporte, para assegurar a adopção das definições, conceitos e nomenclaturas estatísticas aprovadas pelo CNE; h) Zelar pela observância do princípio do segredo estatístico, aprovando, mediante proposta do INE, o regulamento da sua aplicação pelos Órgãos Produtores de Estatísticas Oficiais; i) Emitir parecer sobre propostas do INE de criação Órgãos Produtores de Estatísticas Oficiais; j) Emitir parecer sobre os projectos dos programas anuais de cooperação estatística dos Órgãos Produtores de Estatísticas Oficiais e respectivo financiamento, visando a sua integração; k) Propor a realização de auditorias técnicas externas aos Órgãos Produtores de Estatísticas Oficiais sobre a qualidade das respectivas estatísticas oficiais produzidas; l) Formular recomendações ao Governo sobre os comandos legais e sobre as normas e princípios que devem regular a concepção, produção e difusão das estatísticas oficiais; m) Elaborar trienalmente e apresentar ao Governo um relatório sobre a avaliação do estado do Sistema Estatístico Nacional com as propostas fundamentadas de medidas a tomar; o) Aprovar o seu regulamento interno.

To this reflection, it should be added the Brazilian experience of the Superior Council of Statistics at the time of Bulhões Carvalho, and the National Council of Statistics, here referred to the first period of IBGE. They had diverse meanings and if one should believe it would be worth having such Council in Brazil, it would be useful to recover its history, and if we are defending here a more domestic coordination, internal to IBGE, it is not an obstacle to the constitution of a National Council, if propitious.

Finally, someone tenacious, persistent, determined, in other words, obsessive, obstinate and persuasive is necessary to lead the coordination unit at IBGE. Besides, he or she should be extremely ethical and have a patient and daily communication, as well as add a social-political articulation skill to a solid technical-scientific knowledge, attracting the right people, in a small and harmonic group, and, at last, could peacefully say goodbye to the availability.

Bibliography

Although this paper has not quoted any authors, it is based on intense readings, as indicated below, properly getting mature along the time.

Revelations

FOUCAULT, Michel. La 'gouvernementalité'. In: _____. **Dits et écrit**: 1954-1988. Paris: Gallimard, v. 3, p. 635-657, 1994.

_____. **Vigiar e punir**: nascimento da prisão. 5ª ed. Petrópolis: Vozes, 1987.

GORDON, Colin. Governmental rationality: an introduction. In: BURCHELL, Graham; GORDON, Colin; MILLER, Peter (ed.). **The Foucault effects**: studies in governmentality. London: Harvester Wheatsheaf, 1991.

LATOUR, Bruno. Redes que a razão desconhece: laboratórios, bibliotecas, coleções. In: BARATIN, Marc & JACOB, Christian (orgs.). **O poder das bibliotecas. A memória dos livros no Ocidente**. Rio de Janeiro: Editora UFRJ, 2000. P. 21-44

LATOUR, Bruno. **Ciência em ação. Como seguir cientistas e engenheiros sociedade afora**. São Paulo: Ed. UNESP, 2000.

Further studies

ANDERSON, Margo J. **The American Census, a social history**. New Haven: Yale Un. Press, 1988.

DESROSIÈRES, Alain. **La politique des grandes nombres**. Histoire de la raison statistique. Paris: Éditions la Découverte, 1993.

OTERO, Hernán. **Estadística y Nación**. Una historia conceptual del pensamiento censal de la Argentina moderna, 1869-1914. Buenos Aires: Prometeo Livros, 2006.

PORTER, Theodore M. **Trust in Numbers**. The pursuit of objectivity in science and public life. Princeton: Princeton Un. Press, 1995.

_____. **The rise of statistical thinking, 1820-1900**. Princeton: Princeton Un. Press, 1986.

PRÉVOST, Jean-Guy; BEAUD, Jean-Pierre. **Statistics, public debate and the State, 1800-1945**. London: Pickering & Chatto, 2012.

Detailing

CUNHA, Adrião Simões Ferreira da. **Em torno dos inquéritos qualitativos realizados pelo INE**. Lisboa: INE, 1994.

BARRETO, Aldo de Albuquerque. A gestão do conhecimento, o capital intelectual e os ativos intangíveis no eterno presente das conexões imediatas. **DataGramaZero**. Revista de Ciência da Informação, Rio de Janeiro, v. 13, n. 5, 1-16, out.2012.

FEIJÓ, Carmem, VALENTE, Elvio. As estatísticas oficiais no mundo de hoje. **Ciência Hoje**, Rio de Janeiro, v.41. n. 241, p. 24-29, set. 2007.

FEIJÓ, Carmem. Estatísticas oficiais: credibilidade, reputação e coordenação. **Revista Economia Aplicada**, USP, v. 6, n. 4, out./dez. 2002.

FELLEGLI, Ivan P. Maintaining the credibility of official statistics. **52ª Conference of European Statisticians**. Paris, junho de 2004.

_____. Towards Systems of Social Statistics – Some principles and their application in Statistics in Canada. **Jornal of Official Statistics**, vol. 15, n. 3, p. 373-393, 1999.

_____. **Statistical Services - preparing for the future**. Aguascalientes, México: INEGI, 1998. 80 p.

GÓMEZ, Maria Nèlida González. Regime de informação: construção de um conceito. **Informação & Sociedade** - Estudos, João Pessoa, v. 22, n. 3, p. 43-60, set./dez. 2012.

GUIMARÃES, Eduardo Augusto. Produção de Estatística e Sistema Estatístico. **Revista Brasileira de Estatística**, Rio de Janeiro, v. 51, n. 195, p. 5-12, jan/jun 1990.

LAW, John. Le laboratoire et ses réseaux. In: CALLON, Michel (org). **La science et ses réseaux**: genèse et circulation des faits scientifiques. Paris : Édition La Découverte, 1989. P. 117-148.

MARTIN, Olivier. Da estatística política à sociologia estatística. Desenvolvimento e transformações da análise estatística da sociedade (séculos XVII-XIX). **Revista Brasileira de História**, São Paulo, vol. 21, nº 41, p.13-34, 2001.

SANTOS, Herberth Duarte dos. **Estatísticas públicas**: tempo e significados (o espaço da sociologia das estatísticas). Dissertação de Mestrado (IBGE / ENCE). Rio de Janeiro: junho de 2006.

SCHWARTZMAN, Simon. Legitimidade, controvérsias e traduções em estatísticas públicas. **Teoria & Sociedade**, Belo Horizonte, n. 1, p. 9-38 1997.

STARR, Paul. The sociology of official statistics. In: ALONSO, William & STARR, Paul (ed). **The politics of numbers**. New York: Russell Sage Foundation, 1983. [P. 7-58]

TREWIN, Dennis. The evolution of national statistical systems: trends and implications. **Statistical Journal of the International Association of Official Statistics**, 2007.

VRIES, Willem de. Are we measuring up...? Questions on the performance of National Statistical Systems. **International Statistical Review**, vol. 67, n. 1, p. 63-67, 1999.

Comprehensive productions

SENRA, Nelson. **O saber e o poder das estatísticas**. Uma história das relações dos estatísticos com os Estados Nacionais e com as ciências. Rio de Janeiro: IBGE, 2005.

_____. **História das Estatísticas Brasileiras: 1822-2002**. Vol. 4 - Estatísticas Formalizadas: c1972-2002. Rio de Janeiro: IBGE, 2009.

_____. **História das Estatísticas Brasileiras: 1822-2002**. Vol. 3 - Estatísticas Organizadas: c.1936-c1972. Rio de Janeiro: IBGE, 2008.

_____. **História das Estatísticas Brasileiras: 1822-2002**. Vol. 2 - Estatísticas Legalizadas: c.1889-c1936. Rio de Janeiro: IBGE, 2006.

_____. **História das Estatísticas Brasileiras: 1822-2002**. Vol. 1 - Estatísticas Desejadas: c.1822-c1889. Rio de Janeiro: IBGE, 2006.

Colective productions

CARVALHO JÚNIOR, César Vaz de, et. al. (org.). **Em Associação das Américas, as estatísticas públicas como objeto de estudo**. Salvador: SEI / BA, 2012.

SENRA, Nelson de Castro; CAMARGO, Alexandre de Paiva Rio (org.). **Estatísticas nas Américas**. Por uma agenda de estudos históricos comparados. Rio de Janeiro: IBGE, 2010.

Specific productions

IBGE. **Lyra Madeira, um mestre da demografia brasileira**. Rio de Janeiro: IBGE, 2008. (Memória Institucional 14. Reproduções fac-similares, e textos de Valéria da Motta Leite, Luiz Antônio Pinto de Oliveira)

IBGE. **O IBGE na história do municipalismo e sua atuação nos municípios; o pensamento de Teixeira de Freitas e de Rafael Xavier**. Rio de Janeiro: IBGE, 2008 (Memória Institucional 13. Reproduções fac-similares, e textos de Marcus André B. C. de Melo, Alexandre de Paiva Rio Camargo, Nelson Senra, Marco Aurélio Martins Santos).

IBGE. **Embaixador Macedo Soares: um príncipe da conciliação; recordando o primeiro presidente do IBGE**. Rio de Janeiro: IBGE, 2008. (Memória Institucional 12. Reproduções fac-similares, e textos de Lucia Maria Paschoal Guimarães, Helder Gordim da Silveira, Guilherme Pereira das Neves, Alfredo Bosi, Alexandre de Paiva Rio Camargo).

IBGE. **Teixeira de Freitas, um cardeal da educação brasileira. Sua atualidade intelectual**. Rio de Janeiro: IBGE, 2008 (Memória Institucional 15. Reproduções fac-similares, e textos de Rubem Klein, Libânia Nacif Xavier, Margareth da Silva Pereira, Natália de Lacerda Gil, Alexandre de Paiva Rio Camargo).

IBGE. **Giorgio Mortara: ampliando os horizontes da demografia brasileira**. Rio de Janeiro: IBGE,

2007. (Memória Institucional 9. Reproduções fac-similares, e textos de Elza Berquó e Alicia M. Bercovich, Nelson de Castro Senra, Marco Aurélio Martins Santos).

IBGE. **Isaac Kerstenetzky: legado e perfil**. Rio de Janeiro: IBGE, 2006 (Memória Institucional 8. Reproduções fac-similares, e textos de Maristela Afonso de Andre, Jane Souto de Oliveira, Alexandre de Paiva Rio Camargo e Nelson de Castro Senra).

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